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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/082,581

05/21/1998

KENJI NAGASE

980673

2888

38834

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09/08/2005

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EXAMINER

WHIPKEY, JASON T

ART UNIT

PAPER NUMBER

2612

DATE MAILED: 09/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/082,581

Applicant(s)

NAGASE, KENJI

Examiner

Jason T. Whipkey

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 August 2005.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☒ Claim(s) 5, 7 and 8 is/are allowed.  
6) ☒ Claim(s) 1-3 and 6 is/are rejected.  
7) ☒ Claim(s) 4 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 17 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 8/12/05.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 12, 2005, has been entered.

### ***Response to Arguments***

2. Applicant's arguments filed August 12, 2005, have been fully considered but they are not persuasive.

The examiner understands that the Ibori reference does not disclose short-circuiting a positive terminal and a negative terminal. However, the Josephson (claims 1-3) and Sawanobori (claim 6) references disclose power supplies, each with a positive terminal and a negative terminal. The Ibori reference has been introduced solely to establish the obviousness of short circuiting *two terminals* upon loss of a power source. One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

***Information Disclosure Statement***

3. The information disclosure statement filed August 12, 2005, fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but not all of the information referred to therein has been considered.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Josephson (U.S. Patent No. 4,608,625) in view of Ibori (U.S. Patent No. 5,465,202).

Regarding claim 1, Josephson discloses a power supply circuit, shown in Figure 1, with a first circuit for producing a positive polarity voltage at +12 V and +5 V output terminals, shown on the right side of the figure. This first circuit consists of rectifier 48, which includes capacitors 62 and 66 (column 4, lines 41-50), and a chopper circuit, which consists of electrical switch

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means 44 and transistor switch 24. Switch 24 turns on and off repeatedly to create a “chopped” output from transformer 22 (column 3, lines 44-52, and column 4, lines 13-27).

A second circuit, consisting of rectifier 16, diode 110, and capacitors 114 and 118, produces a negative polarity voltage of -12 V at an output terminal, shown on the right side of Figure 1. Ground terminal GND, also shown on the right side of Figure 1, provides a reference for the positive and negative terminals.

Josephson is silent with regard to including means for short-circuiting the positive and negative terminals upon loss of source power.

Iburi discloses an electric discharge apparatus. As shown in Figure 3, semiconductor switching element 3 short-circuits positive line P and negative line N upon application of a signal from on-off control circuit 12 (“a power-off signal supplied by [a] control circuit”). On-off control circuit 12 receives signal b from input power detecting circuit 13, which detects the off state of the system’s power source.

As stated in column 1, lines 18-19, an advantage to short-circuiting the positive and negative lines upon loss of power is that electrical shock by residual voltage may be prevented. For this reason, it would have been obvious at the time of invention to have Josephson’s system short-circuit the positive and negative terminals upon loss of the power supply.

Regarding claims 2 and 3, transistor 11 in Iburi is a switching element, and resistor 10 is a current-limiting element. Both are located between the positive and negative terminals.

6. Claim 6 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Sawanobori in view of Iburi and further in view of Takeda (U.S. Patent No. 5,475,500).

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Sawanobori shows that CCD 15 uses a power supply 15 consisting of a 15V line and a -9V line (Drawing 1). When power is lost on -9V line S3, discharge circuit 18 discharges the line to prevent “deterioration or destruction of the image pickup element due to application of a negative voltage” (constitution, lines 15-21). Therefore, the significant teachings provided by Sawanobori are: (a) that CCDs may require power supplies outputting separate positive and negative voltages, and (b) that a discharge circuit may prevent deterioration of or destruction to a CCD.

Sawanobori is silent with regard to including means for short-circuiting the positive and negative terminals upon loss of source power.

Iburi discloses an electric discharge apparatus. As shown in Figure 3, semiconductor switching element 3 short-circuits positive line P and negative line N upon application of a signal from on-off control circuit 12. On-off control circuit 12 receives signal b from input power detecting circuit 13, which detects the off state of the system’s power source.

As stated in column 1, lines 18-19, an advantage to short-circuiting the positive and negative lines upon loss of power is that electrical shock by residual voltage may be prevented. For this reason, it would have been obvious at the time of invention to have Sawanobori’s system short-circuit the positive and negative terminals upon loss of the power supply.

Iburi is silent with regard to including a microcomputer and using it to produce the power-off signal.

Takeda discloses an imaging device controlled by microcomputer 16. As shown in the flowchart of Figure 7B, when microcomputer 16 detects a power off command (column 7, lines 58-65), it initiates a shutdown procedure for power supply parts 2a, 4, and 5 (column 8, lines 28-

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41). An advantage to using a microcomputer to produce a power-off signal is that the circuitry used to control the signal may be reused during other operations, thus simplifying the hardware design. For this reason, it would have been obvious at the time of invention to have Ibori perform shutdown control using a microcomputer.

*Allowable Subject Matter*

7. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

No prior art could be located that teaches or fairly suggests the power supply circuit described, particularly one with a first output terminal connected to a chopper circuit and a second output terminal connected to a fly-back circuit, wherein the second terminal has no connection to the chopper circuit.

8. Claims 5, 7, and 8 are allowed.

Regarding each of these claims, no prior art could be located that teaches or fairly suggests the power supply circuit described, particularly one with a first output terminal connected to a chopper circuit and a second output terminal connected to a fly-back circuit, wherein the second terminal has no connection to the chopper circuit.

*Conclusion*

9. All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Whipkey, whose telephone number is (571) 272-7321. The examiner can normally be reached Monday through Friday from 9:00 A.M. to 5:30 P.M. eastern daylight time.



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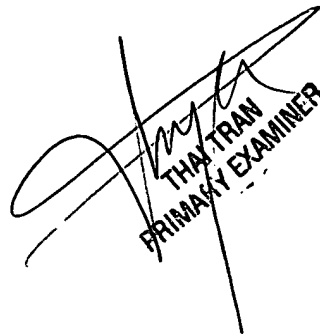
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thai Tran, can be reached at (571) 272-7382. The fax phone number for the organization where this application is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JTW

JTW

August 30, 2005

  
THAI TRAN  
PRIMARY EXAMINER